

HEADQUARTERS  
STRATEGIC AIR COMMAND SURVIVAL SCHOOL  
Camp Carson, Colorado

3 August 1950

The following persons were present at a conference, held in Building T-13, Strategic Air Command Survival School, Camp Carson, Colorado, on 3 August 1950:

Lt Colonel Alan Innes-Taylor, Chief, Survival Training, for the School; Dr. Earl Parker Hanson, Civilian Consultant, University of Delaware, Newark, Dela.; Major Nicholas E. Mitchell, Research Analyst, ADTIC, Maxwell Field, Alabama; Captain G. S. Musulin, Logistics Division, Washington, D. C.; Flight Lieutenant Scott E. Alexander, RCAF Headquarters, Ottawa, Ontario, Canada; Captain Harry Savio, Operations Officer, 3904th Training Squadron; Captain Burton T. Miller, Equipment Development Officer, Strategic Air Command Survival School; Mr. Per Stoen, Chief Training Instructor, Strategic Air Command Survival School; and Mr. Hans Siewers, Operations Analyst, Strategic Air Command Survival School.

Colonel Taylor stated that an advisory committee had been formed "to take advantage of the persons who come here from time to time who have ideas about equipment, training and other pertinent things which can be used to make this School a better one."

By way of introduction, of those present, Colonel Taylor made the following remarks: (permanent party) Captain Miller is in charge of requirements (Air Materiel Command); Captain Savio was with the 10th Search and Rescue Squadron, under Colonel Balchen and is here as Operations Officer to do with Air Evacuation; Mr. Per Stoen has spent considerable time in the Arctic and was in the Arctic Training School which the Air Force operated during the War; Mr. Hans Siewers has been an Operations Analyst for Headquarters Strategic Air Command. Of the visitors present - Flight Lieutenant Alexander has had a great deal of experience in the North, has been with the Northwest Mounted Police, and has made one passage of the Northwest Passage. He is an ice pilot, and has had a great deal to do with development of clothing for Air Rescue and related problems to do with the Arctic. Dr. Hanson set up a survival school during the War and has had a great deal of experience with the jungle - and is one of the few people who have actually lived on a pemmican diet in jungle. Major Mitchell has had a great deal of experience with the desert, and was with the Russian Language School at San Bernadino. Colonel Taylor remarked further "This is the first time the School has had someone lecture about Russia who knows what they are talking about (Major Mitchell)."

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Colonel Taylor then stated that the purpose of this particular meeting was to get "our minds together on pemmican" - the staff and visiting people.

Lt Alexander stated they had received in Canada a nutrition report prepared by the United States Army, which unfortunately did not deal with the pemmican the natives lived on in the North, but that turned out by technicians and it had turned rancid, having no fatty content. He stated people are being biased by this report. He also said that the Canadians will carry out further tests on pemmican this winter, and said that the RCAF had formed an advisory committee consisting only of people with experience in the Arctic and it was with the backing of this Committee that the tests would be completed.

Following Captain Savio's statement that pemmican was not available for testing purposes during the time he spent in Alaska, Colonel Taylor said he thought Colonel Balchen would receive five or six hundred rations for testing purposes.

Colonel Taylor remarked further that "we have been testing pemmican in the Air Force since 1940, and should have come to some conclusion reference it." Colonel Taylor then said he had received a letter from Colonel Wentworth in which he stated that the container institute people in Chicago said they are not interested in any pemmican except the one which they are developing. The one they are developing is the Arctic ration, a meat bar with sage, and the Colonel expressed the feeling that it might be low in calorie content. He said: "They have gone to pork fat and it doesn't stand up like beef or buffalo tallow. We have to drive at something that will keep for ten years."

Mr. Siewers asked what the next step would be in dealing with the question reference pemmican. Colonel Taylor replied that it would be to have Colonel Stampados, School Commandant, take Dr. Hanson's written report in to Headquarters, Strategic Air Command, and let the Air Surgeon or General LeMay say "yes" or "no", and if they say "yes", then the request will go through this School, Captain Miller to Air Materiel Command. Colonel Taylor said further that he had no choice of pemmican himself, that he had used Dr. Coman's and also other pemmican, and the test is whether they have the right balance of fat and meat. He said that if the pemmican the QM is developing now is adequate, and can be packaged in any way SAC wants it - that would be the easiest way out. If that pemmican is not satisfactory Armour's A ration might do. It should not be too difficult a problem to have that made and procured within two to three months.

Dr. Hanson said that if the Quartermaster pemmican keeps for a year and stands up okay it would be all right, but the only way to know whether it is adequate would be to use it over a period of years.

It was <sup>thought</sup> brought by Dr. Hanson, Colonel Taylor and Mr. Stoen that the only pemmican we actually have facts about is the pemmican used on this continent for the past 300 years, which "they dig up with a plow in North Dakota today and it has been there 100 years and is still good."

It was mentioned that the Coman pemmican has been very thoroughly tested in the antarctic and arctic, but nothing is known about its keeping qualities in temperate and tropical zones.

The consensus of opinion of those present was that the Arctic pemmican had been tested over a period of many years and should be used. However this decision was made with no prejudice for substituting another pemmican after it has been proven.

Dr. Hanson also brought out the point that laboratory tests of any pemmican should be field controlled.

Colonel Taylor then directed the attention of the group to the Strategic Air Command bailout kit, especially with reference to shelter or tents which should be incorporated therein. He pointed out that a small tent (on display in Building T-13) had been developed which weighs  $3\frac{1}{2}$  pounds -- for inclusion in the kit. Colonel Taylor asked whether, when the individual already has a parachute from which he can make a shelter - it would be better to use that weight for food. And if it was determined to include the tent - what design tent should be used.

Lt Alexander stated that the considered opinion of the group he represented was that they would not put any tent in the one-man jump kit, as in the North country an adequate shelter could be made through the use of snow blocks and parachute.

Dr. Hanson said that in the jungles the individual wants to get off the ground and it is better to have a light net hammock, with possibly a nylon water proof poncho.

Colonel Taylor asked Dr. Hanson whether a hammock could be improvised from a parachute. Dr. Hanson said yes, but he would prefer a small mesh hammock. He said you could get a hammock of this type which weighs only one to one and one-fourth pound. He said that during the War the Quartermaster issued a beautifully waterproof nylon poncho, and that if he could find the one which was issued to him he would forward it to Colonel Taylor. Colonel Taylor said that the present poncho issued by the Quartermaster is all right in the tropic zones but not in the arctic as it freezes. He said it would have to be made of nylon material not affected by cold weather.

Major Mitchell pointed out that in the desert there was no need for a tent - that a parachute would be adequate.

Captain Miller said he had been "looking into tentage heavily" and was at first against a tent in the Survival Kit, but after talking to numerous people, he felt there were certain advantages in including the tent. He pointed out that in making up the kits they are handicapped in dealing with B-36 aircraft in that they are limited to 35 pounds in weight for the Kit. Also have to consider the fact that the individual may fly across the ice cap and land in the jungle.

Colonel Taylor pointed out that the proposed tent is so small a man could not stand up in it, and because it is so small he could not enter the tent without bringing snow in in the North country, as he could not stand up and shake the snow off his clothing and sweep it out.

The question of water proofing tentage came up and Colonel Taylor pointed out that the kind of tents which have been lived in for years have not been waterproofed. That water proofing makes material impervious, endangering oxygen supply when there is a stove burning in the tent. He pointed out further that these tents which have stood long usage are made of cotton.

Lt Alexander pointed out that they are training their personnel so that if there is no shelter they will be clothed to protect themselves. If they have to have a shelter they use a sod shelter. He said further that your heavy rains come in the wooded areas, and that in that area a single stick tepee is the easiest thing to erect - or a brush shelter may easily be made. In the Arctic you don't get heavy rainfall so can use the parachute, or build a snow house.

Captain Miller then stated that 10,000 tents are in the process of being made for inclusion in the Survival Kits.

Colonel Taylor went on record with this statement: "I consider that putting 10,000 of those tents in the bailout kits without all factors being considered by experienced people is very bad practice."

Lt Alexander then went to the question of the firearm included in the Kit, and said that the only reason he saw for its inclusion is the morale factor. He said snares, fish hooks, et cetera were preferable in enemy held territory as the sound of a rifle shot might indicate your location to the enemy. He said that in the Arctic you could rely on the seal for food which you can get with a seal hook - and on fish, because they are in all the rivers and along the Arctic coast. He pointed out that even if a gun were used, there is only a limited amount of ammunition which can be included, and the individual cannot afford to kill small game.

Colonel Taylor asked Lt Alexander to tell the group about the Canadian experiments with pilot clothing.

Lt Alexander began by saying that their problem had been to determine clothing which could be used both winter and summer, and which the air crew could fly in and land and survive in. They turned to the clothing the natives use - caribou skin clothing, with removable linings for summer wear. A simulated caribou skin was developed. They measured the caribou hair and duplicated with spun nylon fiber. At the same time the nylon fabric was woven the fibers were automatically cut. This clothing has been tested under cold weather conditions and it has been determined that it will not tear and is very durable. Mitts made of this material do not lose their insulation value when they get soaked with gas or oil. Major fault with garments made of this material is that they creep. A new synthetic material is now being developed which will eliminate this fault. Lt Alexander said they are thinking of using the nylon mitt with a pure wool under-mitt. He also mentioned that canvas mukluks with rubber soles are being made for pilots.

Lt Alexander stated that a new primus stove has been developed which can burn the highest octane gas, and that a pressure cooker has been developed for use with this stove.

Mention was made that in the jungle a suitable machete is a must in the survival kit, and that one can be made by cutting the 18" knife issued by the Quartermaster down to 12". A soft steel knife is better than a hard steel one, as the soft steel can be sharpened with a small sharpening stone and if a hard steel knife is nicked an emery wheel is needed to repair it.

Colonel Taylor then brought the discussion to a close with a report on derrick experiments recently completed, and stated that it is hoped that by 1 January as a result of these experiments some derrick may be included in the Survival Kit.